St Joseph's School
El obour

Science Department

4^{th} Primary
2^{nd} term



Name: ....

Class: ....



Unit one

Sheet on lesson 1

Human digestive system

Complete:

1- Proteins are digested in……………………and……………………

2- Fat digestion starts in……………………

3-From digestive juices ……………………,…………and…………………

4- Digested food is absorbed in……………………………………

5- Undigested food is stored in……………………………

6- The common cavity between the digestive and respiratory systems is the ……………………

7- The digestive canal supplementaries are …………………… , …………………… and …………………

8- Small intestine is divided into ………… and …………

9- Liver is one of the digestive canal supplementaries and it secretes …………… Which helps in the digestion of ………………

10- Saliva is produced in the ………… by ……………

11- Changing the complex food into simple food is called ………………

Write the scientific term:

1-A liquid secreted in the mouth and helps in starches digestion. (…………………………)

2-It is from the digestive canal supplementary and secrets bile juice. (………………………)

3- The teeth that cut and tear food into small pieces. (…………………)

4- The common cavity between esophagus and trachea. (…………)

5- An organ allows the passage of food from the pharynx to the stomach. (……………………………)

6- Its enzymes change starch to sugar. (…………………………)

7- A long convoluted tube in which the food is completely digested. (…………………………)

8- An organ stores the undigested food (remains of food) until they are expelled from the body. (………………………)

9- Changing the complicated food substances into simple substances. (………………………)

What happens if?

1- Removal of the small intestine from the human body.

……………………………………………………………………………………………

……………………………………………………………………………………………

2- You add some bird's bile juice to food oil and shake it well.

……………………………………………………………………………………………

……………………………………………………………………………………………

3- When we chew a piece of bread very well.

……………………………………………………………………………………………

……………………………………………………………………………………………

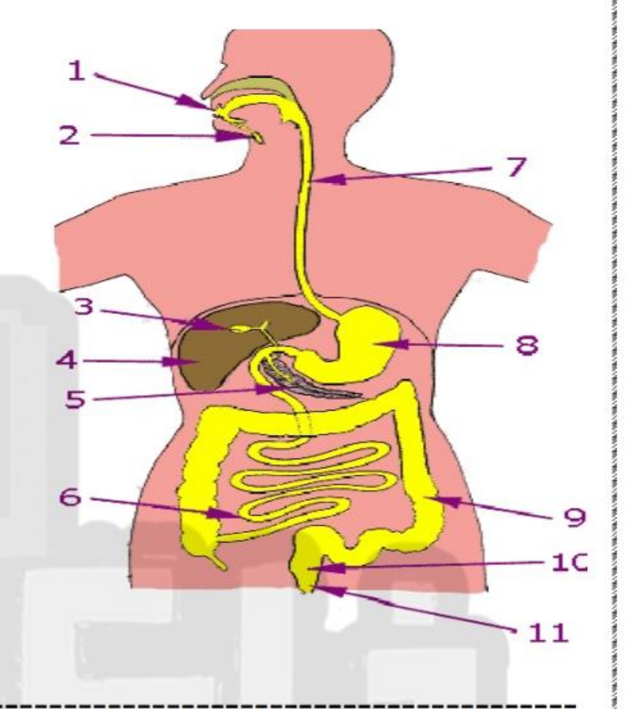
4- You eat meal full of fats.

……………………………………………………………………………………………

……………………………………………………………………………………………

Label the opposite figure:

1-……….2-…………..3-………...4-………...5-…………..6-……………..7-…………...8-…………...9-………..10-……...11-………..



Give reasons for:

1) Digestion process is very important.

…………………………………………………………………………………

…………………………………………………………………………………..

2) Teeth are different in their kinds.

…………………………………………………………………………………

…………………………………………………………………………………..

3) Bile juice is very important.

…………………………………………………………………………………

…………………………………………………………………………………..

4) You must not eat fast meals.

…………………………………………………………………………………………
…………………………………………………………………………………………

5) We must chew food well.

…………………………………………………………………………………………
…………………………………………………………………………………………

6) Proteins are digested in stomach and small intestine.

…………………………………………………………………………………………
…………………………………………………………………………………………

7) You feel a sweaty taste when you chew a piece of bread well.

…………………………………………………………………………………………
…………………………………………………………………………………………

8) Liver and pancreas are considered from the important parts of the digestive system.

…………………………………………………………………………………………
…………………………………………………………………………………………

9) Starch is not digested in the stomach.

…………………………………………………………………………………………
…………………………………………………………………………………………

<u>State one function for each of the following:</u>

1- Liver: ……………………………………………………………………
2- Salivary glands: ……………………………………………………
3- Tongue: …………………………………………………………………
4- Pancreas: ………………………………………………………………

Model answer for lesson (1)

Complete ;

1- stomach and small intestine

2- small intestine (duodenum)

3- bile juice , gastric juice and intestinal juice

4- small intestine 5- large intestine 6- pharynx

7- liver – pancreas and salivary glands

8- duodenum and ileum

9- bile juice – fats 10- the mouth – salivary glands

11- digestion process

Write the scientific term :

1- saliva 2- liver 3- incisors and canines 4- pharynx 5- esophagus

6- saliva 7- small intestine 8- large intestine 9- digestion process

What happens when ?

1- the body can't absorb the digested food so , the person will die

2- oil changes into fatty emulsion

3- starch changes into sugar

4- the digestive system will harm

Label the opposite figure :

1- mouth 2- salivary glands 3- gall bladder 4- liver 5- pancreas

6- small intestine 7- esophagus 8- stomach 9- large intestine 10- rectum
11- anus

Give reason :

1- bec. It changes the complex food into simple substances to let the body get benefit from them

2- bec. Incisors and canines cut and tear the food , while molars grind food to swallow it easily.

3-bec. It changes fats into fatty emulsion

4- to keep your digestive system healthy

5- to swallow food easily and keep the digestive system healthy

6- bec . the stomach digests the protein incompletely

7- bec. Saliva changes starch (bread) into sugar

8- bec. They help in digestion of fats into fatty emulsion

9- bec. It is digested in the mout by saliva

Write the function of :

1- it secretes bile juice that digests the fats into fatty emulsion

2- it secretes saliva that changes starch into sugar

3- it mixes the food with saliva and tastes the food

4- it secretes pancreatic juice that helps in the digestion of fats

Sheet on lesson 2

Human respiratory system

Choose the correct answer:

1- The organ which is responsible for warming air before entering lungs is ....

a- pharynx b- nose c- trachea d- bronchi

2- ………… exist(s) in the nose to filter the air from dust and microbes.

a- Hairs b- Blood capillaries c- Mucous d-(a) and (c)

3- Trachea is supported by incomplete........... to make it permanently open.

a- cilia b- mucous c- Blood capillaries d- cartilage rings

4- ……………………….is called the voice box.

a- Larynx b- Diaphragm c- Epiglottis d- Alveoli

5- The two lungs are surrounded by ……………………..

a- muscles b- ribs c- skin d- diaphragm

6- Gas exchange during the process of respiration occurs in the ………
a- nose b- trachea c- alveoli d- mouth

7- The gas that makes lime water turbid when passing through it for a short time is …………

a- Carbon dioxide b- Oxygen c- Nitrogen d- Hydrogen

8-Gas exchange takes place between oxygen gas and carbon dioxide gas through the blood capillaries which …………….

a- line the nose b- line the trachea
c- line the bronchi d- spread around the alveoli

9- Epiglottis is found ……………..

a- above of larynx   b- above of pharynx   c- beside the tongue

d- inside the nose

10- A living organism obtains his required energy from ………. process.

a- digestion   b- circulation   c- excretion   d- respiration

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Give reasons for each of the following:

1- Breathing should be through nose not through mouth.

……………………………………………………………………………………………
……………………………………………………………………………………………

2- Lime water gets turbid when it passes through exhaled air.

……………………………………………………………………………………………
……………………………………………………………………………………………

3- The presence of epiglottis at the top of larynx in respiratory system in man.

……………………………………………………………………………………………
……………………………………………………………………………………………

4- The presence in crowded places causes difficulty in breathing.

……………………………………………………………………………………………
……………………………………………………………………………………………

5- Exhalation and inhalation processes increase during acting physical activity.

……………………………………………………………………………………………
……………………………………………………………………………………………

6- The importance of respiration process.

……………………………………………………………………………………………
……………………………………………………………………………………………

7- Food doesn't enter the respiratory system during swallowing.

……………………………………………………………………………………………
……………………………………………………………………………………………

8- Trachea has incomplete cartilaginous rings.

……………………………………………………………………………………………
……………………………………………………………………………………………

9- Trachea is lined with cilia.

……………………………………………………………………………………………
……………………………………………………………………………………………..

10- Alveoli are surrounded by a network of blood capillaries.

……………………………………………………………………………………………
……………………………………………………………………………………………..

Complete the following statement:

1- ……………………is a common cavity which leads to the esophagus and trachea.

2-…………………… closes the top of trachea during swallowing.

3- The exhaled air contains ……………………..and………………………

4- ………… muscle helps the mechanism of respiration.

5- The common cavity between the digestive and respiratory systems is the ……………

6-………… separates the chest cavity from the abdominal cavity.

7- Getting air into the lungs is named ………………..

8- Trachea is lined with ………………………to eject up dust.

9- The bottom of the trachea branches into two narrow tubes called ………………………..

10- During the inhalation process, diaphragm ………….. and …………….

11- During the exhalation process, diaphragm …………….and…………….

12- Respiration process occurs through two stages which are ……………. and …………….

What happens in the following cases?

1- There were no any mucous or hair in the nose.

………………………………………………………………………………………………
………………………………………………………………………………………………..

2- Removing the epiglottis from a human body.

………………………………………………………………………………………………
………………………………………………………………………………………………..

3- You blow in a test tube containing clear lime water.

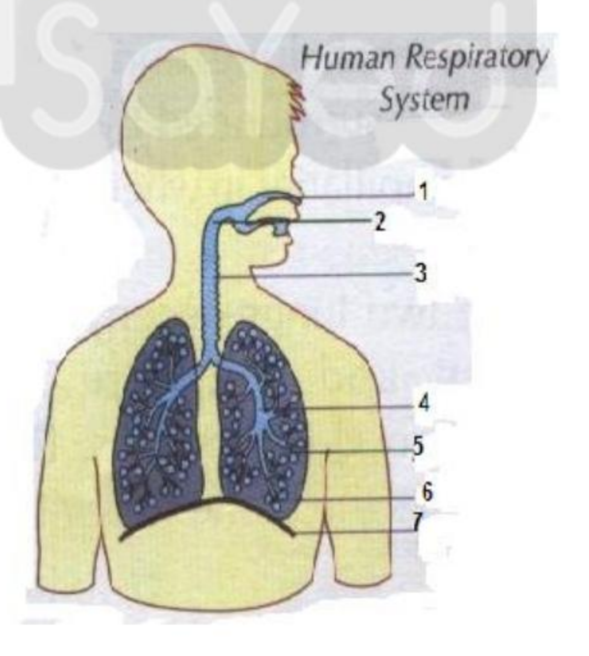
………………………………………………………………………………………………
………………………………………………………………………………………………

4- Being inside crowded places which are bad aerated besides the smokers.

………………………………………………………………………………………………
……………………………………………………………………………………………….

Label the opposite figure:

1-…….2-………3-………4-…………5-………6-…………7-……………



State one function for each of the following:

1- The nose: ………………………………………………………………………….

2- The epiglottis: …………………………………………………………………….
3- Cilia in trachea: ………………………………………………………………….

23- Larynx: …………………………………………………………………………..

24- Alveoli: …………………………………………………………………………..

25- Diaphragm: ……………………………………………………………………..

Model answer for lesson (2)

Choose:

1- b 2- d 3-d 4-a 5-b 6-c 7-a 8-d 9-a 10- d

Give reason for:

1-bec. It is lined with hair and mucus to filter air from dust and microbes and blood capillaries to warm air

2- bec. Exhaled air contains CO2 that changes lime water into turbid

3- to close the trachea to prevent the food from entering it

4- bec. They contains large amount of CO2

5- to get more energy

6- it helps the body to get needed energy

7- due to the presence of epiglottis

8- to be permanently open for breathing air

9- to eject up the strange objects

10- to help in gases exchange

Complete:

1- pharynx 2- epiglottis 3- CO_2 and water vapor 4- diaphragm

5- pharynx 6- diaphragm 7- inhalation 8- cilia 9- bronchi

10- contracts and moves down

11- relaxes and moves up 12- inhalation and exhalation

What happens when?:

1- we cannot filter the air from dust and microbes

2- the food will enter the trachea

3- it changes into milky

4- it harms the respiratory system

Label the opposite figure:

1-nose 2- pharynx 3- trachea 4- bronchus 5- alveoli 6- lung
7- diaphragm

What is the function of :

1- it is lined with hair and mucus to filter air from dust and microbes and blood capillaries to warm air

2- to close the trachea to prevent the food from entering it

3- to eject up any strange objects

4- to produce sound

5- the place in which gases exchange take place

6- it separates the digestive system from respiratory system and helps in respiration process

Sheet on lesson 3

The cell

Put (√) or (X) and correct the wrong ones:

1- The group of similar cells forms a tissue. (   )

2- The systems of the living organisms are composed of organs. (   )

3- The system is a group of tissues working together. (   )

4- Roots and stems are considered from the plant tissues. (   )

5- The cell wall surrounds the animal cell from outside. (   )

6- The cell membrane surrounds the cytoplasm. (   )

7- The life processes of the plant or animal cells occur by the organization of nucleus. (   )

8- The plant cell is similar to animal cells in containing nucleus and cytoplasm only. (   )

9- The chloroplasts are responsible of making food by the process of respiration. (   )

10- The yeast fungus is a harmful micro-organism. (   )

Give reasons for each :

1- Plant cells have a fixed shape.

....

....

2- The Heart is considered an organ.

....

....

3- Animal cell has not a definite shape.

....

....

4- Yeast fungus has an economic importance.

....

....

5- The cell contains nucleus.

....

....

6- Green leaves only perform photosynthesis process.

....

....

Correct the underlined words:

1- Animal cells have <u>cell walls</u>.

2- Both of the plant cell and the animal cell contain <u>chloroplasts</u>.

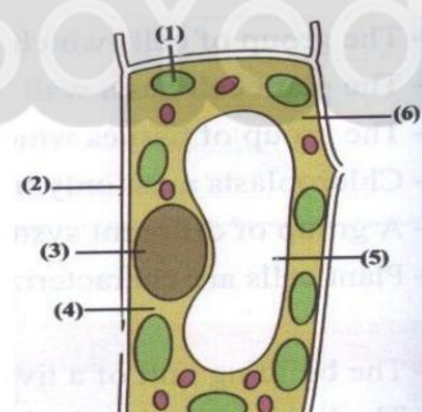
3- Plant makes its own food in <u>roots</u>.

4- <u>Oxygen</u> gas is necessary for photosynthesis process.

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a- This figure represents ………………

b- Label the opposite figure:



1- ……………

2- ……………

3- ……………

4- …………….

5- …………….

6- ………………

a- This figure represents ....

b- Label the opposite figure:

1-...............

2-................

3-...............

4-...............

(1)
(4)
(3)
(2)

Complete each of the following :

1- The animal cell is surrounded by .... While the plant cell is surrounded by ....

2- Yeast fungus is a .... Organism.

3- Plant cells are characterized from animal cells by presence of .... and ....

4- The building unit of a living organism is called ....

5- .... is an example of unicellular living organisms.

6- Yeast fungus is used in a lot of industries such as .... and ....

7- The human body consists of a group of ....

8- The living organism body is made up of systems integrated with each other and every system is made up of .... containing ...., each of them has its own function.

9- Tissue consists of a group of ....

10- Each of the animal cell and plant cell has ...., ... and ....

11- Chloroplasts exist only in the .... cell.

12- Yeast fungus is made up of ...., ... And ....

13- The plant cell has a wall called .... wall, while the animal cell ....

14- ....is the smallest building unit in the living organism's body.

15- ....and ....are examples of unicellular organisms.

Model answer lesson (3)

Put(√) or (x):

1-√ 2-√ 3- x organs 4- x organs 5- x plant cell 6- √ 7- √

8- x cell membrane , vacuole 9- x photosynthesis 10 –x useful

Give reason for:

1- bec. It surrounds by cell wall

2- bec. It consists of tissues

3- bec. It does not have a cell wall

4- bec. It helps in making bread and alcohole

5- to organize all biological operations

6- bec they contain green plastids that make photosynthesis process

Correct underlined words:

1- plasma membrane 2- nucleus 3- leaves 4- carbon dioxide

Label the opposite figure:

a- plant cell 1- chloroplast 2- cell wall 3- nucleus

4- plasma membrane 5- vacuole 6- cytoplasm

a- animal cell 1- plasma membrane 2- small vacuole 3- nucleus

4- cytoplasm

Complete:

1- plasma membrane , cell wall 2- unicellular

3- chloroplasts and cell wall 4- cell 5- yeast 6- making bread and alcohole 7- systems 8- organs and tissues

9- cells 10 – nucleus , cytoplasm and plasma membrane

11- plant 12- cell wall , plasma membrane and nucleus

13- cell , plasma membrane 14 – cell 15- bacteria and fungus

Sheet on lesson 4

The importance of sunlight to living organisms

Write the scientific term of the following:

1- A gas needed to perform photosynthesis process. (………………)

2- The living organisms that can make their own food by themselves through the process of photosynthesis. (……………………)

3- A material used to detect the presence of starch. (…………………)

4- Organisms that help the environment to get rid of the remains of organisms. (……………………..)

5- Living organisms depending on producers directly or indirectly to get their food. (…………………)

6- Living organisms that get their food through decomposing organic wastes as dead bodies, plant remains and decayed food.(……………….)

Give reasons:

1- Decomposers have a great economical and environmental importance.

…………………………………………………………………………………………

…………………………………………………………………………………………..

2- There are chloroplasts in the cells of the producers.

…………………………………………………………………………………………

…………………………………………………………………………………………

3- We have to put the green leaf in ethyl alcohol to test it for the starch.

…………………………………………………………………………………………

…………………………………………………………………………………………

4- The importance of chlorophyll to produce food in plants.
……………………………………………………………………………………………
……………………………………………………………………………………………
5-Bread mold fungus is considered as a decomposer.
……………………………………………………………………………………………
……………………………………………………………………………………………
6-Sheep and chicken are considered as consumers.
……………………………………………………………………………………………
……………………………………………………………………………………………

Complete the following:

1- In the plant, the photosynthesis process is carried out in …………. which contain ………………………..

2- ……………………is a biological process that takes place in the green parts of the plant to make its own food.

3- The necessary factors of the photosynthesis process are ……………, ………………………… and …………………………..

4-………………and …………………… are substances produced from the photosynthesis process.

5- The plant cells absorb sunlight by …………………..which give the plant its ……………………color.

6- …………………… is considered as a source of energy for plants.

7- In the photosynthesis process,………………. gas is absorbed and ……………………… gas is produced.

8- Iodine is used to test food for the presence of ………… in the green leaf.

Correct the underlined words:

1- Plant makes its own food in roots.
2- Oxygen gas is necessary for photosynthesis process.
3- The green plants are considered as consumer food organisms.
4- Green plants are called consumers.
5- From the products of photosynthesis process are oxygen gas and carbon dioxide gas.
6- Green plants absorb oxygen gas in photosynthesis process.

What happens in the following cases?

1- The absence of chloroplast from the corn plant cells.
…………………………………………………………………………………………
…………………………………………………………………………………………

2- Adding iodine solution to starch.
…………………………………………………………………………………………
…………………………………………………………………………………………

3- Plants aren't exposed to sunlight for few days.
…………………………………………………………………………………………
…………………………………………………………………………………………

4- The absence of decomposers from nature.
…………………………………………………………………………………………
…………………………………………………………………………………………

5- Plants disappear from the environment.
…………………………………………………………………………………………
…………………………………………………………………………………………

Put (√) or (X) and correct the wrong ones:

1- Light is the only factor for photosynthesis process. ( )
2- A lot of industries depend mainly on decomposers. ( )
3- Oxygen gas is essential for photosynthesis process. ( )
4- Plants are known as autotrophic organisms. ( )
5- Photosynthesis process occurs in all parts of the plant. ( )
6- Sunlight is necessary for photosynthesis process. ( )

Model answer for lesson (4)

Write the scientific term :

1- CO_2 2- producers 3- iodine 4- decomposers 5- consumers
6- decomposers

Give reason for :

1- they help us to get rid of dead bodies and food remain and increase the soil fertility
2- to help them to make photosynthesis process
3- to remove the green color
4- bec. It helps the plant to make photosynthesis process
5- bec. They can not make their food but they decompose the food remains
6- bec . they feed directly or indirectly on plants

Complete:

1- leaves – chloroplast 2- photosynthesis 3- sunlight , $CO_2$and water
4- starch and oxygen 5- chloroplast ,green 6- sunlight
7- CO_2 , oxygen 8- starch

Correct underlined word:

1- leaves 2- CO_2 3- producers 4- producers 5- starch 6- CO_2

What happens when ?:

1- the plant can not make its food
2- blue color is formed
3- they will be yellow and weak
4- we can not get rid of dead bodies and food remains
5- all living organisms will die

Put (√) or (X):

1- 1- x CO_2 and water 2- √ 3- x CO_2 4- √ 5- X leaves 6-

Unit Two

Energy and its

Forms

Sheet on lesson 1

Forms of energy and their changes

Complete the following:

1- Energy is the ability to do ....

2- The spring of the children's toy stores ....energy.

3- .... is the energy produced by a heater, while .... is the energy produced by a radio.

4- ....is the energy produced by a dry cell, while .... energy is stored in a dry cell.

5- .... is a form of energy that reaches ear causing hearing.

6- Sound originates from ....

7- In the guitar, ... energy changes into .... energy.

8- When you rub your hands together, ... energy changes into .... energy.

9- We get ....energy from the solar cells.

10- In a solar heater, ... energy changes into .... energy.

11- In photosynthesis process , ... energy changes to .... energy.

12- Electric energy changes to light energy as in ....

13- In the motor of a car, electric energy changes into .... energy.

Put (√) or (x) and correct the wrong ones:

1- The energy stored in the spring of a toy is kinetic energy. ( )

2- The energy produced from the solar heater is electric energy. ( )

3- Light is a form of energy that reaches ear causing hearing. ( )

4- Sound stops when the vibration of a tuning fork stops. ( )

5- Focusing the sun rays by a convergent lens on a piece of paper causes the changing of the light energy into electric energy. ( )

6- On rubbing your hands together, Kinetic energy changes to heat energy. ( )

7- Electric energy changes to light energy as in electric heater. ( )

8- Electric bell changes electric energy into potential energy. ( )

9- Sound stops when the vibration of tuning fork stops. ( )

10- Electricity is form of energy. ( )

Give reasons for each of the following:

1- You hear a sound when you tap a tuning fork.

……………………………………………………………………………………

……………………………………………………………………………………

2- When you ride a bicycle, some changes of energy happen.

……………………………………………………………………………………

……………………………………………………………………………………

3- When you remove a nail from wooden plate, the nail becomes warm.

....

....

Write the scientific term for each of the following:

1. The ability to do work. (..................)
2. The visible energy coming out from the sun or lamps.
(............................)
3. The energy resulted due to the vibration of objects.
(..........................)
4. The energy of running water to rotate turbines.
(............................)
5. Energy produced by heat. (............................)
6. Energy produced by sound. (............................)

What happens in each of the following cases.

1. When you rub your hands together.

....

....

2. On passing an electric current in the motor of fan.

....

....

3. When you put a magnifying lens over a paper and the lens is exposed to sun rays for a period of time.

……………………………………………………………………………………………

……………………………………………………………………………………………

4. A piece of rubber is pulled and fixed from its ends then leaving it.

……………………………………………………………………………………………

……………………………………………………………………………………………



Sheet on lesson 2
Electricity

Give reasons:

1. Small bits of paper are attracted to a ruler that was rubbed by your hair.

……………………………………………………………………………………………

……………………………………………………………………………………………

2. Attracting a balloon rubbed by the wool to a wall

……………………………………………………………………………………………

……………………………………………………………………………………………

3. It is forbidden to use electric current at home for performing an activity.

……………………………………………………………………………………………

……………………………………………………………………………………………

4. The vision of light in the sky.

……………………………………………………………………………………………

……………………………………………………………………………………………

5. Standing of our hair when you combing it by a comb.

……………………………………………………………………………………………

……………………………………………………………………………………………

6. Battery is a main part in the electric circuit.

……………………………………………………………………………………………

……………………………………………………………………………………………

7. The electric circuit contains connecting wires.

……………………………………………………………………………………………

……………………………………………………………………………………………

Choose the correct answer:

1- Most of equipments at home work by ………………..
(Heat - light - electricity)

2- ………….is formed when electric charges remain on an object.
(Static electricity - light - current electricity)

3- The source of electric current called ………………..
(Switch - wire - battery)

4- ………….. is used to close and open the electric circuit.
(Wire - switch - battery)

5- The path of electric current is called …………
(Battery – switch – electric circuit – wires)
6- ……… are electric charges flows through wires for long distances.
(Static electricity – heat – light – current electricity)

What happens when?

1- Rubbing your hair by a comb.

……………………………………………………………………………………

……………………………………………………………………………………

2- On closing an electric circuit by a switch.

……………………………………………………………………………………

……………………………………………………………………………………..

3- Closing a charged balloon to a wall.

……………………………………………………………………………………

……………………………………………………………………………………..

4- The absence of a switch in an electric circuit.

……………………………………………………………………………………

……………………………………………………………………………………

5- Removing the battery from a closed electric circuit.

……………………………………………………………………………………

……………………………………………………………………………………

6- Cutting of electric current from home for one day.

……………………………………………………………………………………

……………………………………………………………………………………..

Write the scientific term for of the following:

1. It is formed from electric charges that remain on an object. (……………………………)
2. They are electric charges flow thought connecting wires for long distances. (………………………..)
3. The source of electric current n an electric circuit. (………………….)
4. It is used to close and open the electric circuit. (……………………..)
5. They are used to transfer electric from a battery to lamp.(………….)